

**Department of Energy
Office of Worker Protection Programs and Hazards Management
Radiological Control Technical Position
RCTP 99 - 01**

**Applicability of the General Rule per Title 10 Code of Federal Regulations
Part 835 (10 CFR 835) Section 835.3 for Protective Forces Personnel**

Issue:

As part of their review of the amendment to 10 CFR 835, the Office of Security Evaluations (SE) raised a concern that, in the case of a security emergency, the rule, as written, may subject site managers to enforcement actions under the Price Anderson Amendment Act (PAAA). Specifically, SE noted that 10 CFR 835 exempts "activities conducted under the Nuclear Explosives and Weapons Safety Program relating to the prevention of accidental or unauthorized nuclear detonations". SE cited Department of Energy (DOE) General Counsel Ruling 95-1 which states "This exclusion is drafted narrowly to cover only those activities necessary to prevent an accidental or unauthorized nuclear detonations [sic]. (That is, where the component parts of a nuclear weapon have been assembled in a manner such that a nuclear detonation could take place)."

Note: This technical position discusses the provisions contained in 10 CFR 835, published December 14, 1993. On November 4, 1998, a revision to 10 CFR 835 was published in the Federal Register. Sites could have up to 18 months from December 4, 1998, before compliance with the amended rule is required. The revised 10 CFR 835 contains some changes in Subpart N "Emergency Exposure Situations", such as elimination of the Emergency Exposure Guideline Table from the rule. However, even with these changes, this technical position is consistent with the amended rule and may be useful in developing revised radiation protection programs.

Introduction:

Subpart A of 10 CFR 835, *General Provisions*, establishes the scope, definitions and general rule for compliance with the provisions of the rule.

Failure to meet 10 CFR 835 requirements, unless the actions are excluded in the scope of the rule or fall within the provisions of the general rule, could result in issues of noncompliance with 10 CFR 835 and subsequent PAAA enforcement actions.

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Discussion:

Applicable Requirements

10 CFR 835

§ 835.1 Scope

(b) Exclusion. The requirements in this part do not apply to:

3. Activities conducted under the Nuclear Explosives and Weapons Safety Program relating to the prevention of accidental or unauthorized nuclear detonations.

§ 835.3 General Rule

(d) Nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.

§ 835.1302 Emergency exposure situations.

(d) The dose limits for individuals performing these operations are as follows:

Guidelines for Control of Emergency Exposures

Dose limit		
{ 1 } (whole body)	Activity performed	Conditions

5 rems	All
10 rems ...	Protecting major property ...	Where lower dose limit not practicable.
25 rems ...	Lifesaving or protection of large populations	Where lower dose limit not practicable.
>25 rems	Lifesaving or protection of large populations	Only on a voluntary basis to personnel fully aware of the risks involved.

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{1} The lens of the eye dose limit is three times the listed values. The shallow dose limit to the skin of the whole body and the extremities is ten times the listed values. These doses are in addition to and accounted for separately from the doses received under the limits in §§ 835.202 and 835.205.

(e) Each individual selected shall be trained in accordance with § 835.902 and briefed beforehand of the known or anticipated hazards that the individual will be subjected.

Technical Position:

The DOE protective forces are tasked under the Atomic Energy Act with taking actions, as deemed necessary in the interest of the common defense and security to protect nuclear and other material from theft or diversion. Much of the material they protect is not associated with the Nuclear Explosives and Weapons Safety Program relating to the prevention of accidental or unauthorized nuclear detonations. One potential scenario would be a DOE protective force individual receiving an occupational exposure to ionizing radiation in excess of the 10 CFR 835 dose limits in the course of preventing terrorists from stealing a shipment of special nuclear material. There are many similar scenarios.

The DOE General Counsel responded to a question concerning what activities are intended to be included within the scope of the § 835.1(b)(3) exclusion. In response, General Counsel Ruling 95-1 stated "This exclusion is drafted narrowly to cover only those activities necessary to prevent an accidental or unauthorized nuclear detonation (that is, where the component parts of a nuclear weapon have been assembled in a manner such that a nuclear detonation could take place)."

There are potential situations where a DOE protective force individual could receive an exposure to ionizing radiation in excess of the 10 CFR 835 limits (or be in noncompliance with other 10 CFR 835 provisions) as a result of emergency actions taken to protect nuclear or other material from theft or diversion. Per General Counsel Ruling 95-1, these situations would not be included within the scope of the § 835.1(b)(3) exclusion. However, these situations, if conducted as part of an emergency response to a threat to nuclear or other material, would likely fall within the scope of § 835.3(d) which states that "Nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety."

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The specific situation resulting in the exposure would need to be evaluated on a case by case basis. Generally, protective force emergency response actions, such as that discussed in the above scenario, would likely be deemed to be necessary to protect health and safety and would be considered to be consistent with § 835.3(d). However, routine mission functions of protective actions personnel, such as conducting routine inspections of safeguards and security programs, would not fall within the scope of § 835.3(d) and would need to be conducted in compliance with all applicable provisions of 10 CFR 835.

Protective force individuals responding to the types of emergency situations previously discussed would still need to meet the requirements of § 835.1302 *Emergency Exposure Situations*. Specifically, these individuals must:

- Be volunteers and be fully informed of the risks, if they could receive a whole body dose in excess of 25 rems (§ 835.1302(d)).
- Be trained in accordance with § 835.902 and briefed beforehand of the known or anticipated hazards that the individual will be subjected (§ 835.1302(e)).

It is anticipated that, in most situations these requirements can be met prior to the need to respond to an emergency.

Summary

DOE protective force individuals exposed to ionizing radiation as a result of emergency actions taken to protect nuclear or other material from theft or diversion would not be included within the scope of the §835.1(b)(3) exclusion. These situations would likely fall within the scope of §835.3(d) and 835.1302 and would likely be considered to be consistent with 10 CFR 835 requirements. Protective force individuals responding to these types of emergency situations would need to meet the requirements of §835.1302.

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References:

Atomic Energy Act of 1954, as amended.

10 CFR 835, *Occupational Radiation Protection*, U.S. Department of Energy,
December 14, 1993.